

Mount Jefferson State Natural Area General Management Plan



North Carolina Department of Environment and Natural Resources

Division of Parks and Recreation

November 2012

CHAPTER 1

PARK PURPOSE AND HISTORY

MISSION STATEMENT FOR THE STATE PARKS SYSTEM

The North Carolina state parks system exists for the enjoyment, education, health, and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features and recreation resources of statewide significance; to provide outdoor recreation opportunities in a safe and healthy environment; and to provide environmental education opportunities that promote stewardship of the state's natural heritage.

PARK PURPOSE STATEMENT

Mount Jefferson State Park was established in 1956 when the efforts of local citizens led to the acquisition of 400 acres of land. The establishment was the culmination of an extensive local effort to create a public park on the scenic mountain top. The park serves North Carolina's residents and visitors by protecting wildlife and natural communities within the park; providing opportunities and facilities for viewing and enjoying the major scenic values of the area; providing opportunities for appropriate outdoor recreational use; and providing interpretive and environmental programs that educate park visitors on the plant life, geology, and ecology.

Significant biological resources include the high-elevation plant communities that occur above the 4,000-foot elevation, as well as diverse forests on the lower slopes. The high elevation plant communities include Red Oak Forest and the exposed Rock Summit community and Heath Bald community. The fragile plant communities associated with the rock outcroppings at higher elevations include a number of rare species. American chestnut once dominated many of the lower slopes, but these now grade from Northern Hardwood Forest and Rich Cove Forest on the northern slopes, to Montane White Oak Forest on other slopes. The mountain was established as a National Natural Landmark in 1974.

Amphibolite outcroppings at the mountain peak are the most significant geological resources. These outcroppings are particularly evident at two locations, the Luther's Rock Overlook and a second area extending from the peak down along the eastern ridge of the mountain.

The panoramic views from Mount Jefferson are the most significant scenic values in the park. The mountain vistas toward the Blue Ridge Mountains have attracted visitors for decades and generated the local interest in the park's establishment. The best views are from the granite outcroppings on the peak that rise 1,600 feet above the surrounding area. The mountain is an important scenic landmark on the local landscape.

Mount Jefferson was authorized as a state park so that its geological, biological, and scenic values could be protected. The Division of Parks and Recreation is charged with preserving these values and with providing park experiences that promote pride in and understanding of North Carolina's natural heritage.

HISTORY OF THE STATE NATURAL AREA

Mount Jefferson and its nearby peaks are remnants of a once lofty, mountainous region that wound across much of the western part of state in the remote geological past. Mount Jefferson lies along the drainage divide of the North Fork and South Fork of the New River, one of the oldest river systems in North America and the world.

Geologists have estimated that the area was approximately 15,000 feet high when it was formed about 300 million years ago. Weathering and the erosive action of streams and other erosive forces throughout millions of years wore away the softer, less resistant rocks and carved Mount Jefferson and the area's other mountains. More resistant rocks, including the amphibolite and metagraywacke of Mount Jefferson, were slower to erode. These and other rocks comprise the peaks now standing above their surrounding plateau.

While no evidence of permanent Native American settlements in the Ashe County area has been found, game was plentiful, and the Cherokees, Creek and Shawnees hunted, fished and skirmished in the area and used the New River as a major migration route. Early settlers and travelers were unsure of whether they were in Virginia or North Carolina, so in 1749 Peter Jefferson led a surveying party to establish a state line between the two states.

Bishop Augustus Spangenberg, head of the Moravian Church in America, in 1772 made the first recorded visit to the Ashe County area. He was searching for 100,000 acres of land for settlement purposes apart from a large Moravian settlement in Bethlehem, Pennsylvania. Eventually, land near Winston-Salem was chosen for the new settlement. (State of North Carolina, 1977) This first Moravian settlement is now an archeological park. In 1753, Spangenberg wrote that "...we have ascertained that towards the western counties there are plenty of people who have come from Virginia, Maryland, Pennsylvania, New Jersey and even from New England." Bishop Spangenberg did not seem to encounter any Indians on his trip in 1752, although he did see an "old Indian field." (Colonial Records, Vol. IV)

References to hunting expeditions also date back to the 1770s. David Helton led one of the earliest, and Daniel Boone became one of the most remembered early explorers. (Ashe County, 2010) Few North Carolinians, other than adventurous individuals like Daniel Boone and fellow adventurers travelling the Cumberland Trail to Kentucky, had ventured westward beyond the Blue Ridge Mountains. The area's first recorded deed, to James Baker, is dated 1773 (Fletcher, 1963).

Travel over the mountains was difficult and delayed settlement of the area. The New River also hindered transportation to and from the east. As lands in Maryland, Pennsylvania and Virginia began to fill, settlers looked further west. The first white settlers in the area came to the region by way of the Great Wagon Road through the Shenandoah Valley and the Upper Pennsylvania Road. The settlers were mainly of English, German and Scotch descent. The first buildings in the region were hunting cabins built in the 1760s, including one by Peter Jefferson. (state of North Carolina, 1977) Daniel Boone used a cabin in nearby Boone. Hunting, trapping and farming provided food and income for early settlers.

Less than 50 families lived in what is now Ashe County at the end of the American Revolution in 1783 (Fletcher, 1963). Ashe County was incorporated by the North Carolina General Assembly in 1799 from land taken from Wilkes County. By this time, the region had been a part of two states, four counties, one foreign county, and the Indian Territory. When the first federal census for Ashe County was taken in 1800, 2,785 people lived in the county. The county was named in honor of Samuel Ashe (1725-1813), a Revolutionary patriot, a superior court judge, and governor of North Carolina from 1795-1798.

The town of Jefferson, the Ashe County seat near the base of the mountain, was incorporated in 1803. Early residents called the town Jeffersonton. The town was named for the nation's third president, Thomas Jefferson. Nearby West Jefferson was incorporated in 1915. (Powell, 1968) Jefferson became the first town in the nation to be named for Thomas Jefferson, then the vice president of the United States (Ashe County, 2010).

Starting around 1800 and lasting most of the century, mining and the manufacture of iron became important to the local economy. The Harbard Bloomery Forge, the county's first iron forge, operated from 1807 to 1817 when a flood washed it away. It was located not far from the mouth of Big Helton Creek in the northern part of the county. (Weaver, 1998) This and other forges later built in Ashe County produced iron products needed by the developing country, including axes, shovels, hoes, plows, wagon parts, and other tools and equipment. Copper mining also became important to the county.

Dr. Elisha Mitchell (1793-1857), after ascending "...the highest of the mountains in the neighborhood..." wrote in July 1828 that "Nearly the whole county of Ashe lay at our feet... Some of the plantation in view also presented a noble appearance, but oh, what an ocean of mountains... Jefferstontown has 6 or 8 houses dwelling houses--rather shabby." (Diary of a Geological Tour, 1905)

Legend holds that during the Civil War caves served as hideouts for escaped slaves traveling to freedom on the Underground Railroad. The legend has become a part of the oral tradition about the mountain, but there is no evidence that escaped slaves ever used the mountain. Mount Jefferson has no real caves, although it does have rock ledges that could have provided some shelter.

Early transportation in the mountainous county relied on trails used by horses and pack animals. A few all-weather roads were eventually constructed, with several of these being private ones that required tolls. Starting in 1915, the Norfolk and Western Railway Co. operated for over 60 years in Ashe County. (Ashe County, 2010) The depot was west of Jefferson. New development centered on the railroad, causing West Jefferson to grow. (state of North Carolina, 1977)

It wasn't until the 1930s that people took an interest in creating widespread access to the mountain. Workers from the federal Works Progress Administration (WPA), a Great Depression-era program, constructed a 2.1-mile road to the summit of the mountain during the 1930s. In 1939, a group of Ashe County officials sought to have improvements made to the existing road up the mountain. The request for road improvements was rejected by the state

Highway and Public Works Commission because state funds could not be used for roads leading to private property. An effort by a local group to have the General Assembly accept the area as a state park failed in 1941.

In 1947, prominent local businessman and former mayor of West Jefferson, H.C. Tucker, for the sum of \$1, leased 0.2 acres to the state for 99 years so a forestry lookout tower could be constructed (Office of the Register of Deeds of Ashe County, 1947). The lease conveyed to the state its first property interest in the mountain. Under terms of the lease, the state was to maintain the road up the mountain. Shortly thereafter, Tucker and J. B. Hash generously donated to the town of West Jefferson 26 acres on top of the mountain that included the forestry tower site. With the public ownership, state road funding now became possible. In May 1949, the town of West Jefferson, now the tower site owner, leased the state 0.2 acres for 99 years to continue locating and reporting forest fires.

In November 1951, West Jefferson donated the 26 acres to the state. The deed contains a reverter clause requiring that the property be used for "...State Park and State Forestry services and purposes...or substantially similar uses..." (Office of the Register of Deeds of Ashe County, 1951). The 26-acre conveyance to the state merged the earlier lease terms into fee ownership, and the previous leases were destructed by operation of law under the doctrine of merger.

Under a memorandum of agreement signed in February 1952, state parks and state forestry jointly administered the 26 acres. Since it had a fire tower and a county warden at West Jefferson able to supervise the area, the Division of Forestry took the lead in managing the site as a forest recreation area. The Division of State Parks cooperated in maintaining the site, supplied picnic tables, and furnished technical advice on planning and development, including road and parking design. The state Highway and Public Works Commission agreed to improve and maintain the road to the top of the mountain and to construct and maintain parking areas. (Department of Conservation and Development, 1952)

Although locally led efforts to attain state park status for the mountain continued, they were unsuccessful due to the adoption in 1955 of new state park standards requiring a minimum size of 400 acres. The existing park contained only 36 acres. Park staff determined that additional property was available. Once again, local citizens and organizations found a way to help the park. Money was raised, donations of land solicited, and eventually enough additional acreage was assembled to qualify for state park designation.

At a meeting of the Board of Conservation and Development held Oct. 8, 1956, the Board accepted the gift of 12 tracts containing approximately 464 acres on the summit and slopes of Mount Jefferson (including the previously donated 26 acres) from the town of West Jefferson, Ashe County Memorial Hospital, and various citizens of Ashe County. Three tracts totaling 164 acres were purchased for \$1,900; the rest of the land was generously donated. (Board of Conservation and Development, 1956) The majority of these deeds contain reverter clauses that apply if the land should ever be used for other than park purposes. Mount Jefferson State Park opened Oct. 13, 1956.

The park's name was chosen in honor of Thomas Jefferson and his father, Peter, who owned land

in the area and surveyed the nearby North Carolina-Virginia state line in 1749. The towns of Jefferson and West Jefferson, located at the base of the mountain, also share the Jefferson name.

Prior to being named a state park, Mount Jefferson had been operated on a seasonal basis. After becoming a state park, it opened year-round, weather permitting.

In the early 1970s, a metal communication tower was constructed by Blue Ridge Electric Membership Corp., and a smaller tower was added later to improve communications for local safety programs. The Highway patrol also now uses the high mountain for communication purposes. (Preliminary Master Plan, 1977)

Since 1956, Mount Jefferson has continued to be operated as a unit of the state parks system. In 1974, the mountain was designated as a *National Natural Landmark* by the National Park Service because of its large variety of interesting and unusual plants. Because of its steep slopes, fragile soils, high quality natural communities and rare species, park development has been necessarily limited. In the 1990s, the park name was changed to Mount Jefferson State Natural Area to better reflect the focus on natural resource protection and environmental education.

8/31/10

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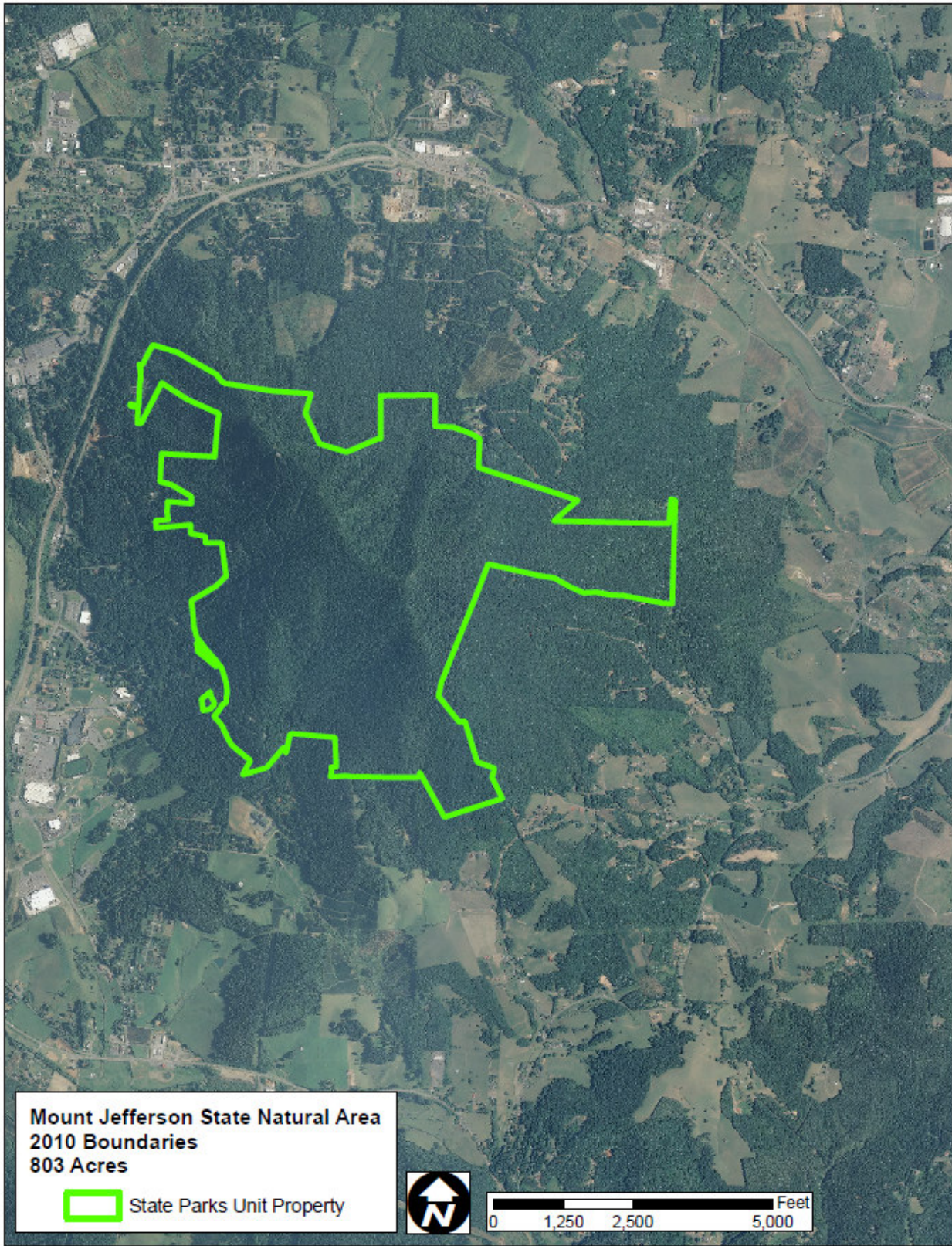
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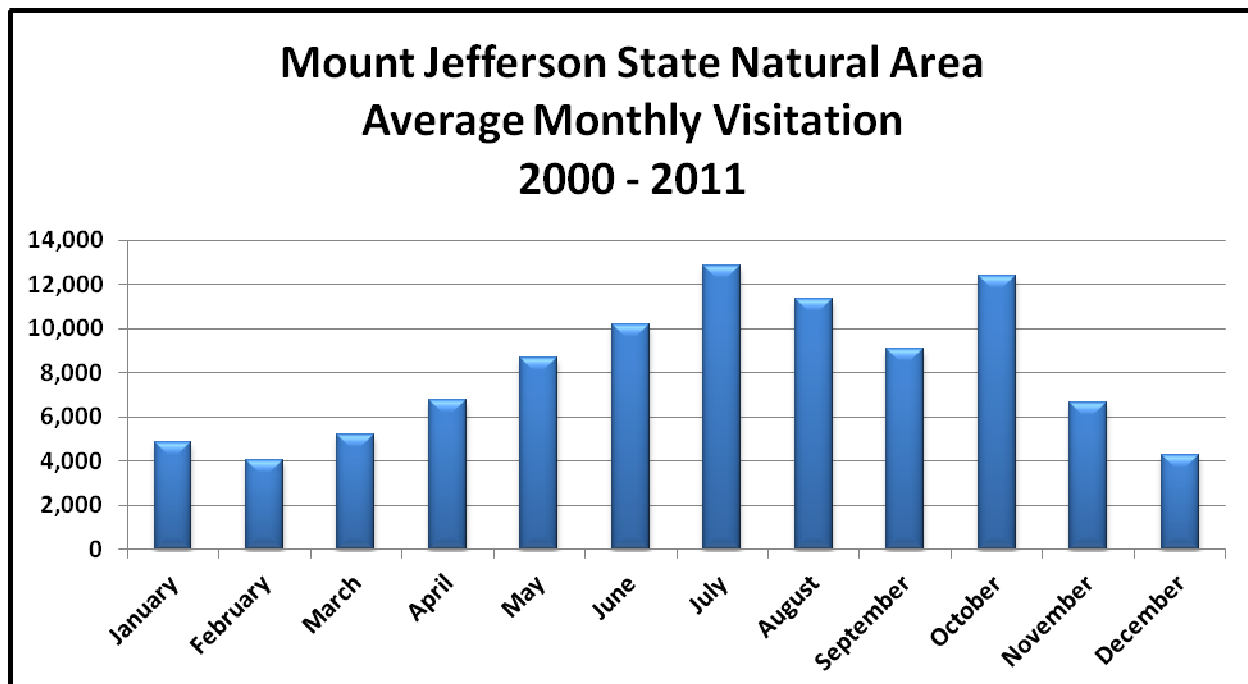
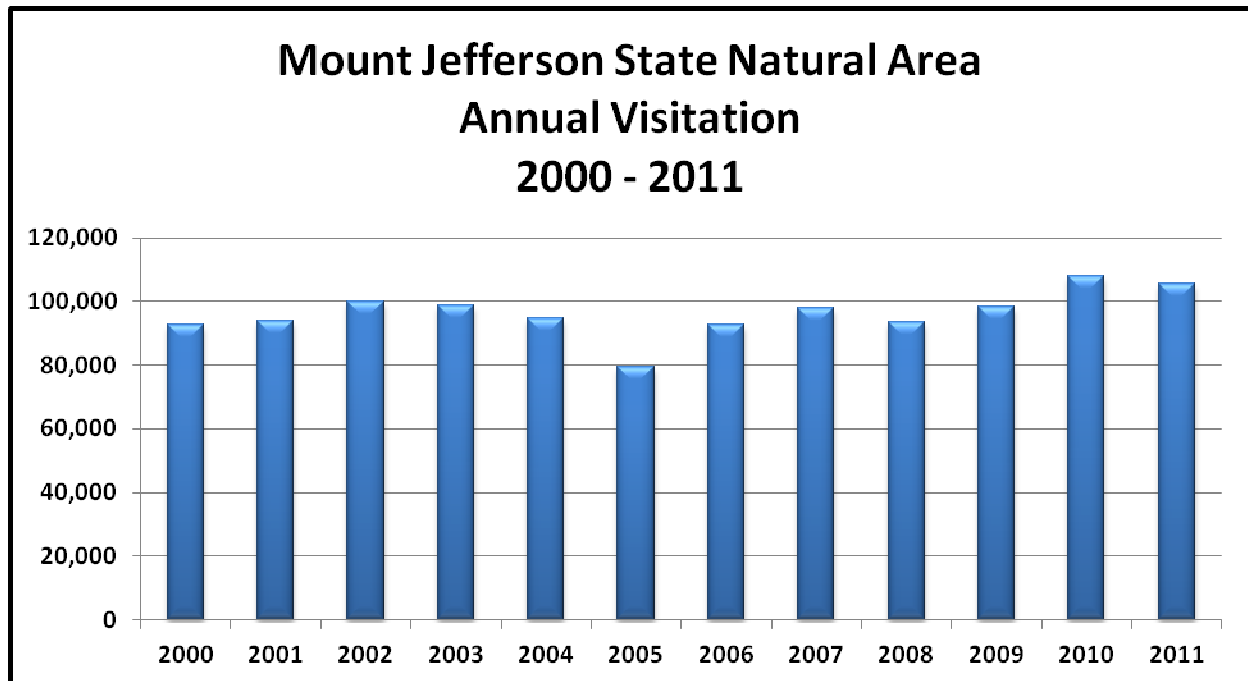
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CHAPTER 2

PARK DATA



VISITATION
MOUNT JEFFERSON STATE NATURAL AREA
2012



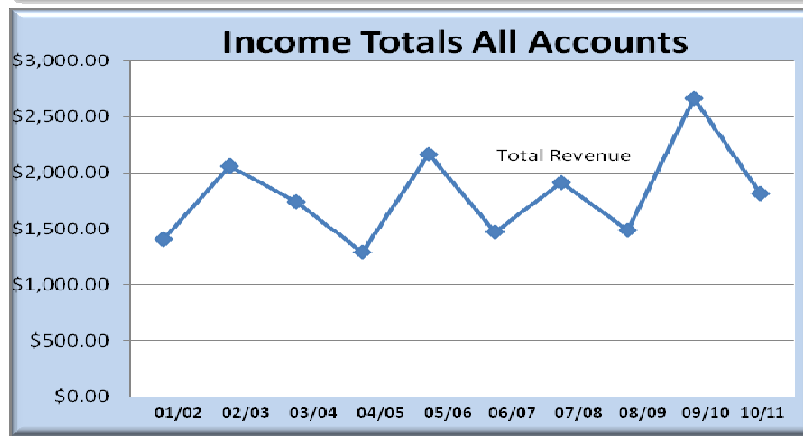
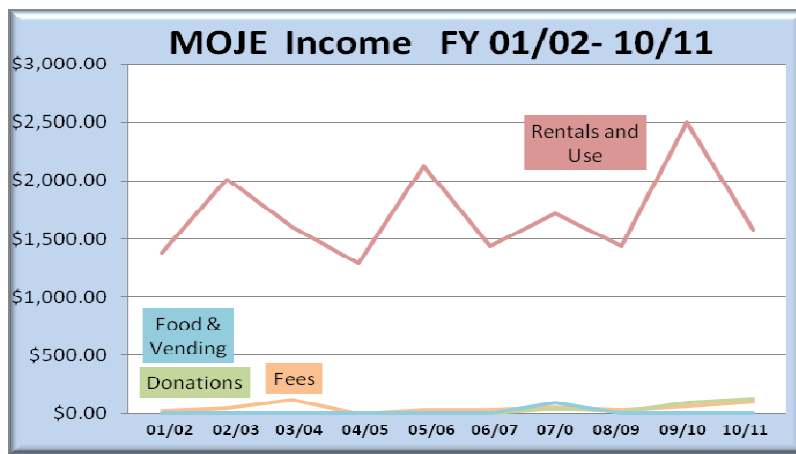
STAFFING
MOUNT JEFFERSON STATE NATURAL AREA
2012

Permanent Staff	
Park Ranger	2
Maintenance Mechanic IV	1
Office Assistant III*	1

*OA III is a half-time position.

MOJE INCOME STATEMENT

FY	Fees	Rentals & Use	Food Vending Sales	Donations	Operating Contracts	Pier Permits	Totals
01/02	\$25.00	\$1,384.00	\$0.00	\$0.00	N/A	N/A	\$1,409.00
02/03	\$50.00	\$2,009.00	\$0.00	\$0.00	N/A	N/A	\$2,059.00
03/04	\$125.00	\$1,604.00	\$10.00	\$0.00	N/A	N/A	\$1,739.00
04/05	\$0.00	\$1,294.00	\$0.00	\$0.00	N/A	N/A	\$1,294.00
05/06	\$30.00	\$2,128.00	\$5.60	\$0.00	N/A	N/A	\$2,163.60
06/07	\$30.00	\$1,440.00	\$0.00	\$0.00	N/A	N/A	\$1,470.00
07/08	\$60.00	\$1,715.00	\$38.27	\$100.00	N/A	N/A	\$1,913.27
08/09	\$30.00	\$1,440.00	\$17.71	\$0.00	N/A	N/A	\$1,487.71
09/10	\$65.00	\$1,870.00	\$96.52	\$0.00	N/A	N/A	\$2,663.52
10/11	\$105.00	\$1,556.47	\$133.75	\$0.00	N/A	N/A	\$1,812.22



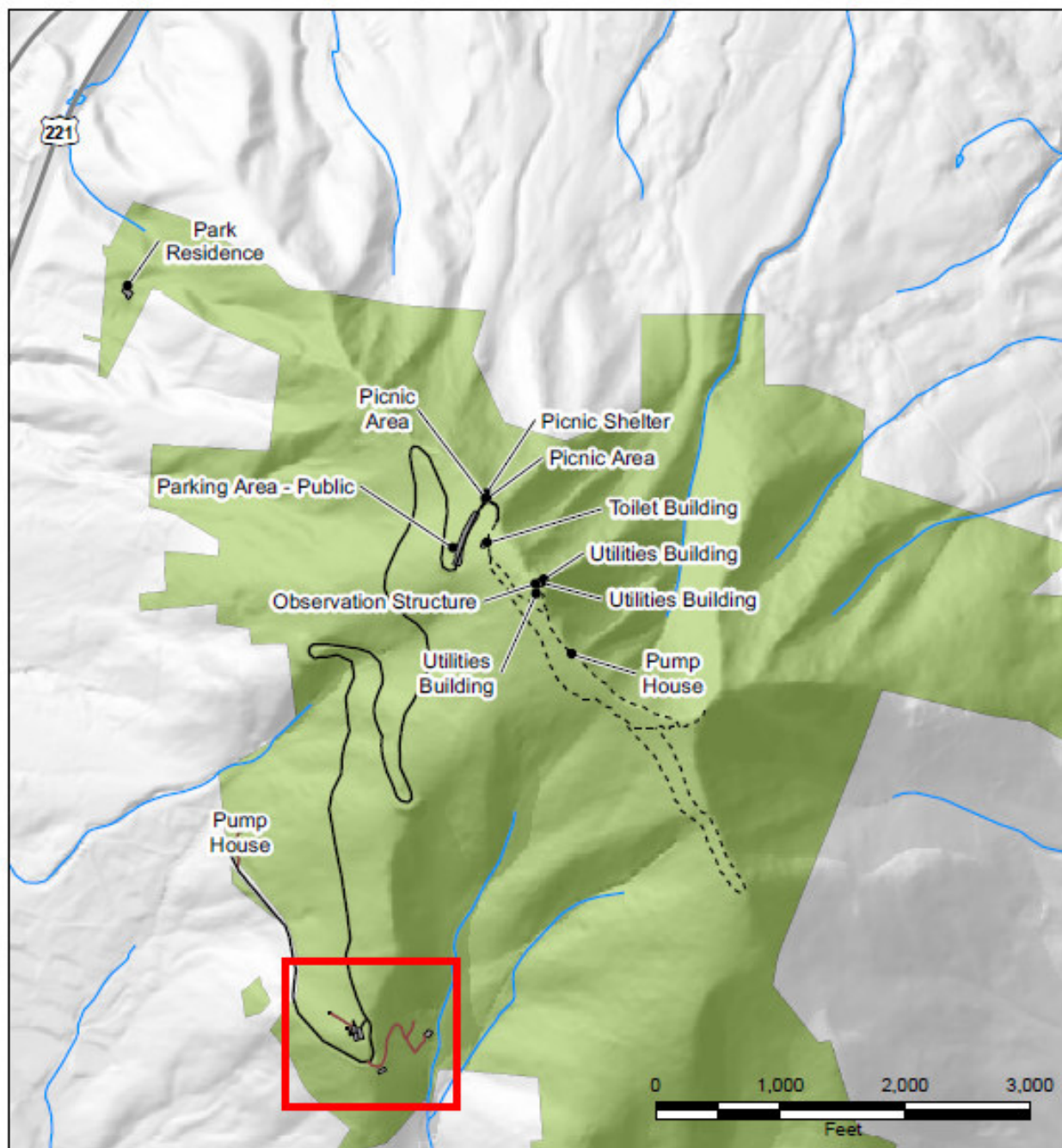
Budget Database Information

FACILITY INVENTORY
MOUNT JEFFERSON STATE NATURAL AREA
2012

GIS ID	Facility Name	Facility Type
MOJE0001	Park/Maintenance Office	Park Office
MOJE0006	Tractor Shed	Storage Building
MOJE0008	Staff Area Water Tank	Water Tank
MOJE0014	Staff Area Fuel Storage Building	Fuel Storage Building
MOJE0007	Staff Area Pump House	Pump House
MOJE0004	Vollmer House	Park Residence
MOJE0005	Leland House	Park Residence
MOJE0010	Summit Picnic Shelter	Picnic Shelter
MOJE0012	Summit Picnic Area 1	Picnic Area
MOJE0013	Summit Picnic Area 2	Picnic Area
MOJE0015	Summit Utility Building 1	Utilities Building
MOJE0016	Summit Utility Building 2	Utilities Building
MOJE0017	Summit Utility Building 3	Utilities Building
MOJE0021	Summit Observation Structure	Observation Structure
MOJE0003	Summit Pump House	Pump House
MOJE0009	Entrance Pump House	Pump House
MOJE0018	Summit Public Parking	Parking Area - Public
MOJE0002	Summit Toilet Building	Toilet Building
MOJE0019	Staff Area Staff Parking	Parking Area - Staff
MOJE0020	Staff Area Public Parking	Parking Area - Public
MOJE0022	Seagraves House	Park Residence

12,879 feet of paved road

1,596 feet of unpaved road

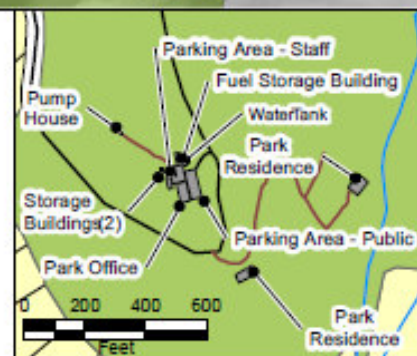


Mount Jefferson State Natural Area Facilities Inventory

March 2012



- Existing Trail
- Road - Paved
- Road - Unpaved
- Existing Facilities
- State Natural Area



TRAILS INVENTORY
MOUNT JEFFERSON STATE NATURAL AREA
2012

Mount Jefferson State Natural Area has three (3) hiking trails that provide visitors with opportunities to hike along the ridge of the summit of the mountain, through rhododendron shrubs to natural rock outcroppings (including Luther Rock) that provide wonderful opportunities to view the surrounding landscape, and to learn about the area history when hiking the “Lost Province Trail.”

All existing trails are located near the top of the mountain and are accessible from the visitor parking area.

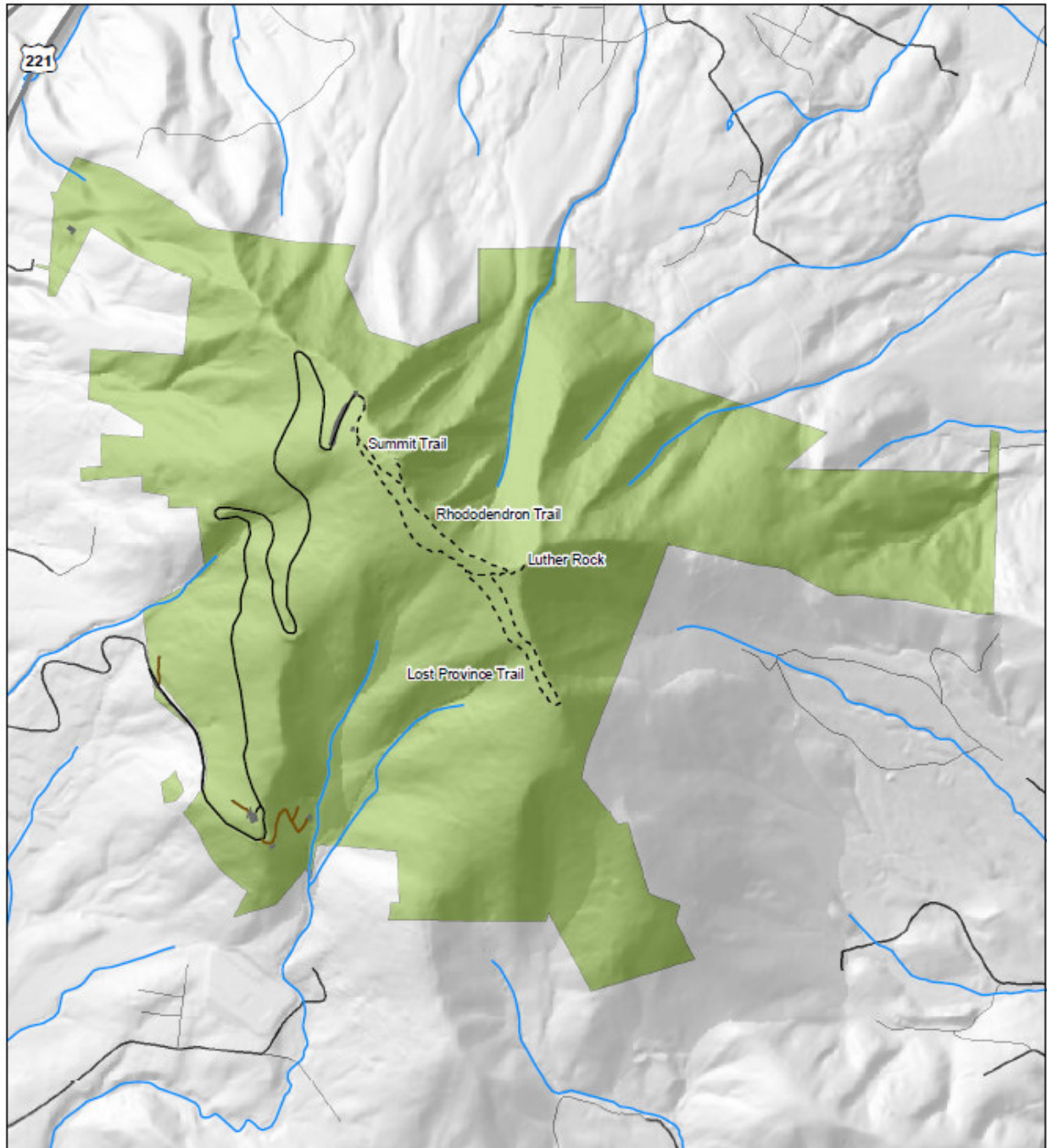
Existing trail names and trail lengths are as follows:

- Summit Trail: 0.3 miles in length (one way)
- Rhododendron Trail: 0.75-mile loop trail (one way) accessible from the Summit Trail
- Lost Province Trail: 0.6-mile loop trail (one way) accessible from the Rhododendron Trail

Global Positioning System (GPS) data was collected for all existing trails. Trail specific information including maintenance, repair and renovation needs are noted in the table below.

MOUNT JEFFERSON STATE NATURAL AREA
EXISTING TRAILS ASSESSMENT

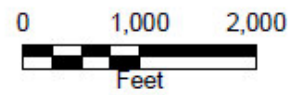
Trail Name / Segment	Trail Length	Overall Trail Condition	Renovations Needed (Relocation, Tread Renovation, Steps, Bridge, Et al)	Trail Width	Trail Surface	Blaze
Summit Trail	0.3 miles	Good		8 Feet	Crusher Run	Green Diamond
Rhododendron Trail	0.75 miles	Fair	Steps need to be installed along an 800 foot section of trail now in poor condition	4 Feet	Crusher Run	Red Circle
Lost Province Trail	0.6 miles	Good		4 Feet	Natural	Blue Triangle



**Mount Jefferson
State Natural Area**

**Trails Inventory
June 2010**

-  State Natural Area
-  Trail
-  Road - Paved
-  Road - Unpaved



INTERPRETATION AND EDUCATION DATA
MOUNT JEFFERSON STATE NATURAL AREA
2012

Interpretive and educational programming at Mount Jefferson has trended toward increasing the proportion of outreach programs to schools, camps, clubs, meetings and other off-site audiences.

INTERPRETIVE AND EDUCATION PROGRAM PARTICIPANTS

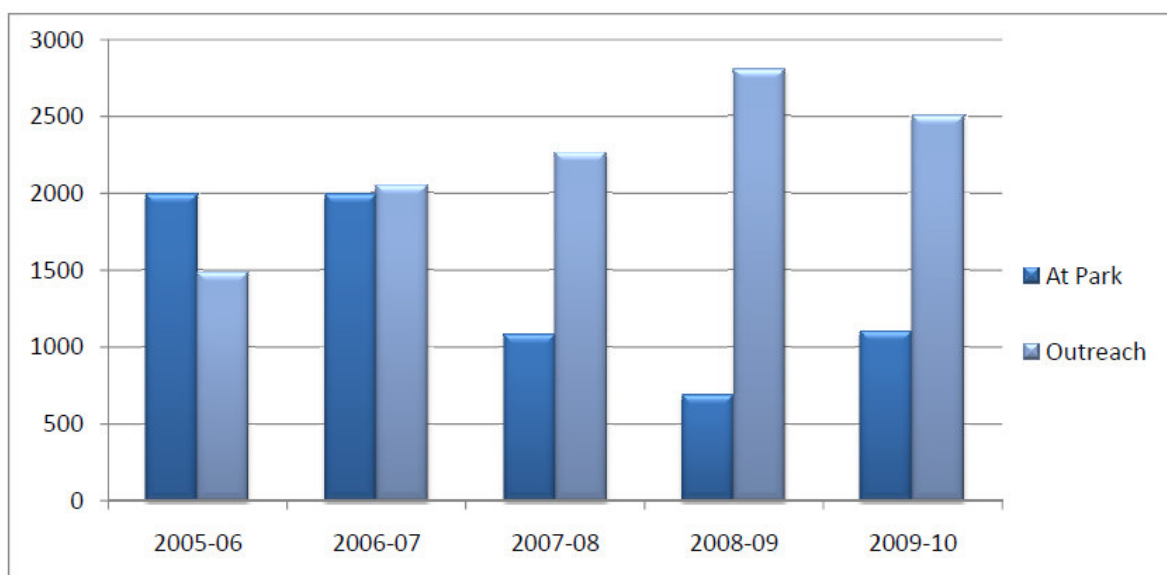
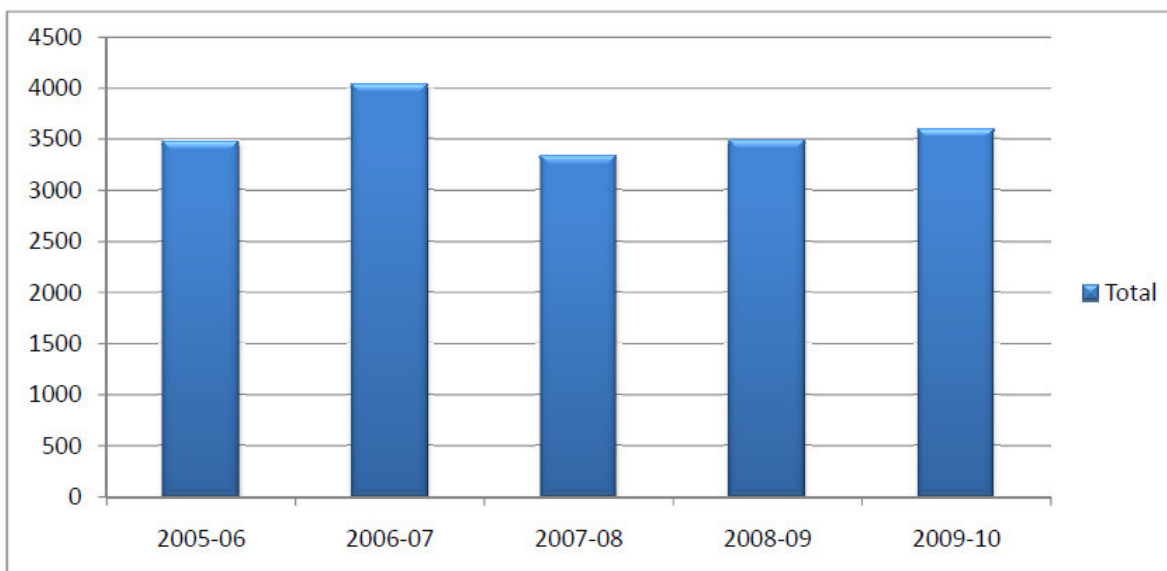


EXHIBIT AND SIGNAGE INVENTORY
MOUNT JEFFERSON STATE NATURAL AREA
2012

Exhibits and signs in North Carolina state parks can be regulatory, orientation or interpretive. This signage follows system wide sign guidelines that preserve the North Carolina state park “look” and ensure maximum accessibility. Signs also express the character of the individual park.

All exhibits and signs in the park were inventoried and evaluated in 2010.

Visitor Center Exhibits

Mount Jefferson SNA currently has a park office with a large bulletin board type display that houses a park map and images of the park. The park currently does not have a visitor center with museum exhibits. Information exhibits (maps) provide an initial orientation for park visitors, and interpretive exhibits (images and text) are based on the park’s primary interpretive themes. Design and construction of the exhibits follows all division standards, state codes and accessibility mandates.

Parkwide Interpretive Signs

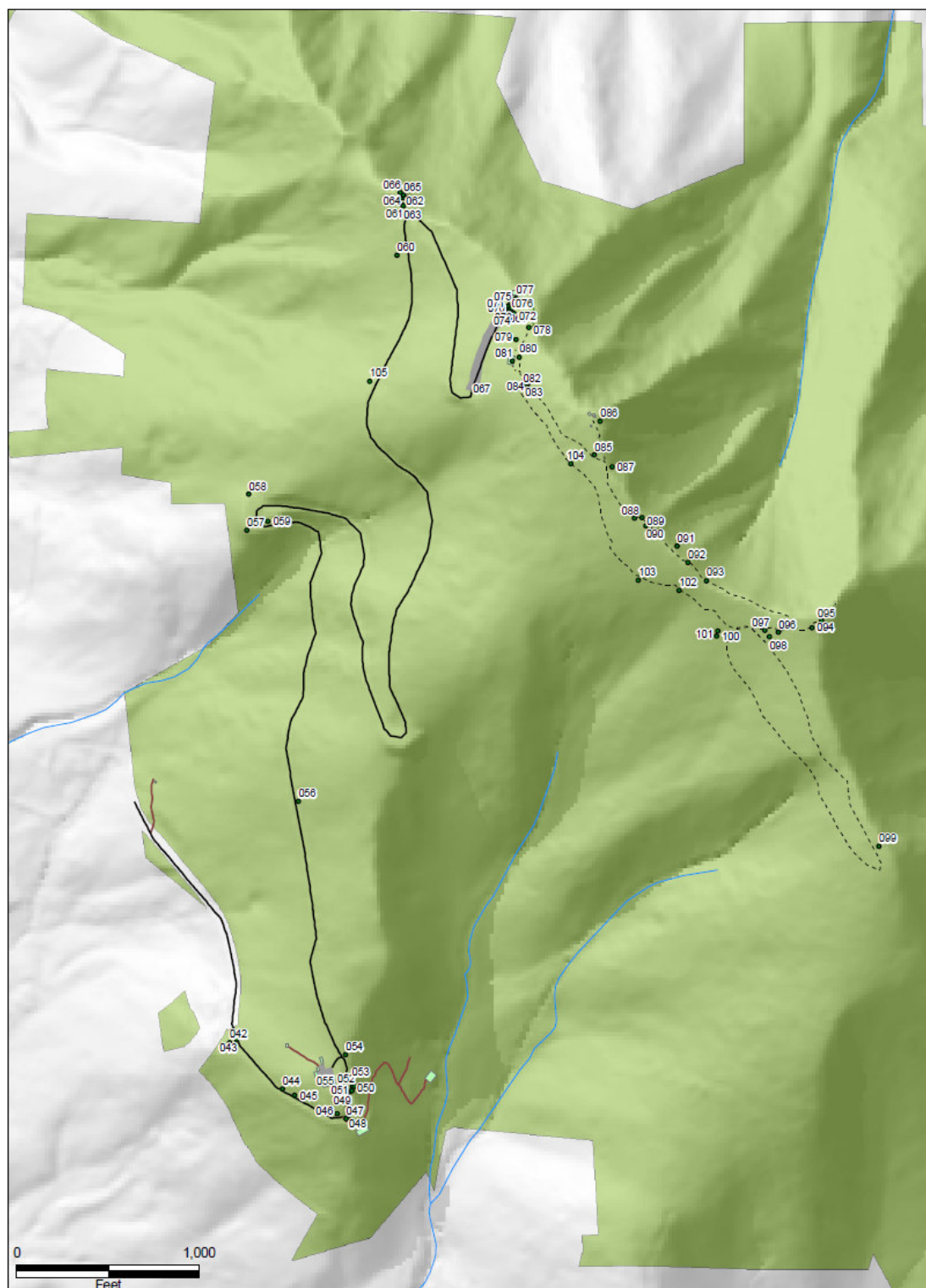
The park presents the primary interpretive themes and provides relevant seasonal exhibits. Interpretive signs along trails interpret the park’s major themes in a detailed, site-specific manner. They are placed so the viewer can see what is being interpreted, and written so that the visitor can relate to the information. The July 2010 sign inventory at Mount Jefferson SNA identifies 20 interpretive displays throughout the park. A few of these need to be updated to meet new division graphics standards.

Parkwide Wayfinding System

The signs at Mount Jefferson SNA appear to be clustered into five (5) major groups (see GIS map of signs). Four of these clusters are arrival points or destinations along the single park road. The fifth is a decision point on a trail. All are appropriate locations for sign clusters. The long road and trail stretches between sign clusters are refreshing, and allow visitors to experience nature without distractions.

MOUNT JEFFERSON STATE NATURAL AREA
EXHIBIT AND SIGN INVENTORY

Sign Type	Number
Entrance Sign	1
Regulatory Signs	32
Orientation/Wayfinding Signs	23
General Information Signs	2
Interpretive Signs	20
Museum Exhibits	0



Mount Jefferson
State Natural Area
Sign Inventory

July 2010

Legend

- gps_0710_wpts
- State Natural Area
- Road - Paved
- Road - Unpaved
- - - Trail
- Footpath



NATURAL HERITAGE PROGRAM ELEMENT OCCURRENCE RECORDS
MOUNT JEFFERSON STATE NATURAL AREA
2012

Amphibian	Scientific Name	Fed. Status	NC Status
Northern Slimy Salamander	<i>Plethodon glutinosus</i>	None	W4
Southern Ravine Salamander	<i>Plethodon richmondii</i>	None	W2

Bird	Scientific Name	Fed. Status	NC Status
Brown Creeper	<i>Certhia Americana</i>	None	SC
Sharp-shinned Hawk	<i>Accipiter striatus</i>	None	SR
American Kestrel	<i>Falco sparverius</i>	None	W1, W5
Least Flycatcher	<i>Empidonax minimus</i>	None	W1
Red-breasted Nuthatch	<i>Sitta canadensis</i>	None	W1
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	None	W1
Common Raven	<i>Corvus corax</i>	None	W2
Golden-crowned Kinglet	<i>Regulus satrapa</i>	None	W2
Winter Wren	<i>Troglodytes troglodytes</i>	None	W2, W5

Insect	Scientific Name	Fed. Status	NC Status
Appalachian Azure	<i>Celastrina neglectamajor</i>	None	W2
Early Hairstreak	<i>Erora laeta</i>	None	Y
Indian Skipper	<i>Hesperia sassacus</i>	None	W2
Tiger Spiketail	<i>Cordulegaster erronea</i>	None	W2

Mammal	Scientific Name	Fed. Status	NC Status
Alleghany Woodrat	<i>Neotoma magister</i>	FSC	SC
Appalachian Cottontail	<i>Sylvilagus obscures</i>	FSC	SR-G
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	None	W2
Long-tailed Weasel	<i>Mustela frenata</i>	None	W3

Mollusk	Scientific Name	Fed. Status	NC Status
Glossy Pillar	<i>Cochlicopa lubrica</i>	None	W3

Non-Vascular Plant	Scientific Name	Fed. Status	NC Status
A Liverwort	<i>Barbilophozia barbata</i>	None	SR-D
A Liverwort	<i>Barbilophozia hatchery</i>	None	SR-D
A Liverwort	<i>Lophozia excise</i>	None	SR-D
A liverwort	<i>Lophozia herterocolpos</i>	None	SR-D
A Liverwort	<i>Scapania mucronata</i>	None	SR-D
A Liverwort	<i>Tritomaria exsectiformis</i> <i>spp exssectiformis</i>	None	SR-D

A Liverwort	<i>Plagiochila virginica</i>	None	SR-L
A Liverwort	<i>Diplophyllum apiculatum</i> var <i>taxifolioides</i>	None	SR-L
Golden Tundra-moss	<i>Rhytidium rugosum</i>	None	SR-P
Matted Feather Moss	<i>Brachythecium populeum</i>	None	SR-P
Reptile	Scientific Name	Fed. Status	NC Status
Eastern Milk Snake	<i>Lampropeltis triangulum</i> <i>triangulum</i>	None	W3
Vascular Plant	Scientific Name	Fed. Status	NC Status
Bog Goldenrod	<i>Solidago uliginosa</i>	None	SR-P
Bristly Muhly	<i>Muhlenbergia glomerata</i>	None	SR-P
Creeping Sunrose	<i>Crocianthemum propinquum</i>	None	SR-P
Hay Sedge	<i>Carex argyrantha</i>	None	SR-P
Jacob's Ladder	<i>Polemonium reptans</i> var. <i>reptans</i>	None	SR-P
Mountain Clematis	<i>Cleamtis occidentalis</i>	None	SR-P
Northern Blue Cohosh	<i>Caulophyllum giganteum</i>	None	SR-P
Plains Sunrose	<i>Crocianthemum bicknellii</i>	None	SR-P
Rock Fir-clubmoss	<i>Huperzia porophila</i>	None	SR-P
Rusty Cliff Fern	<i>Woodsia ilvensis</i>	None	SR-P
Wood's Sedge	<i>Carex woodii</i>	None	SR-P
Yellow Ladies'-tresses	<i>Spiranthes ochroleuca</i>	None	SR-P
Carolina Saxifrage	<i>Micranthes caroliniana</i>	FSC	SR-T
Roan Sedge	<i>Carex roanensis</i>	None	SR-T
Trailing Wolfsbane	<i>Aconitum reclinatum</i>	None	SR-T
Carolina Saxifrage	<i>Micranthes caroliniana</i>	FSC	SR-T
Roan Sedge	<i>Carex roanensis</i>	None	SR-T
Trailing Wolfsbane	<i>Aconitum reclinatum</i>	None	SR-T
Appalachian Fir-clubmoss	<i>Huperzia appressa</i>	None	W1
Broadleaf Witch Grass	<i>Dichanthelium latifolium</i>	None	W1
Goldie's Woodfern	<i>Dryopteris goldiana</i>	None	W1
Lesser Rattlesnake-orchid	<i>Goodyera repens</i>	None	W1
Lyreleaf Rockcress	<i>Arabidopsis lyrata</i> ssp. <i>lyrata</i>	None	W1
Mitchell's St. John's-wort	<i>Hypericum mitchellianum</i>	None	W1
Purple-stem Cliff-brake	<i>Pellaea atropurpurea</i>	None	W1
Roan Rattlesnakeroot	<i>Prenanthes roanensis</i>	None	W1
Smooth Peavine	<i>Lathyrus venosus</i>	None	W1
Wafer Ash	<i>Ptelea trifoliata</i>	None	W1
Butternut	<i>Juglans cinera</i>	FSC	W5
Fraser Fir	<i>Abies fraseri</i>	None	W5A
Carolina Hemlock	<i>Tsuga caroliniana</i>	None	W5A
Eastern Hemlock	<i>Tsuga canadensis</i>	None	W5A
Common Black-cohosh	<i>Actaea racemosa</i>	None	W5A
Ginseng	<i>Panax quinquefolius</i>	None	W5B, SC
Barksdale Trillium	<i>Trillium sulcatum</i>	None	W5B

Galax	<i>Galax urceolata</i>	None	W5B
Large-flower Trillium	<i>Trillium grandiflorum</i>	None	W5B
Painted Trillium	<i>Trillium undulatum</i>	None	W5B
Red Ramps	<i>Allium tricocum</i>	None	W5B
White-tubed Colicroot	<i>Aletris farinose</i>	None	W5B
Alleghany Mountain Buttercup	<i>Ranunculus allegheniensis</i>	None	W7
Appalachian Woodland Sedge	<i>Carex lucorum var. austrolucorum</i>	None	W7
Bigtooth Aspen	<i>Populus grandidentata</i>	None	W7
Closed Gentian	<i>Gentiana clausa</i>	None	W7
Coffee Tinker's Weed	<i>Triostema aurantiacum</i>	None	W7
Crested Climbing Buckwheat	<i>Fallopia scandens var. 1</i>	None	W7
Erect Knotweed	<i>Polygonum erectum</i>	None	W7
Heartleaf Scullcap	<i>Scutellaria ovate ssp. ovate</i>	None	W7
Low White-haired Witch Grass	<i>Dichanthelium linearifolium</i>	None	W7
Mexican Muhly	<i>Muhlenbergia mexicana</i>	None	W7
Small's Beardtongue	<i>Penstemon smallii</i>	None	W7
White Bear Sedge	<i>Carex albursina</i>	None	W7

Definitions of Status Codes:

FSC = Federal species of concern. A species under consideration for listing but for which further data are needed to resolve its conservation status.

SC = Special Concern. Any NC species that requires monitoring but that may also be collected and sold.

SR = Significantly Rare. This is an NHP designation. For animals, it applies to those species not listed by the WRC as Threatened, Endangered, or Special Concern but that have been deemed rare enough to warrant monitoring. For plants, it applies to species not listed by the PCP as Endangered, Threatened, or Candidate for those listings. These species generally have fewer than 100 populations statewide and have been substantially reduced in numbers due to habitat loss.

SR-D = Significantly Rare and disjunct from its main range in a different part of the country or world.

SR-G = Significantly Rare and a game species. By law, it **cannot** be listed as E, T, or SC.

SR-L = Significantly Rare, with its range limited to NC and adjacent states (endemic or nearly so). These species have 25-50 populations in NC, but <100 rangewide.

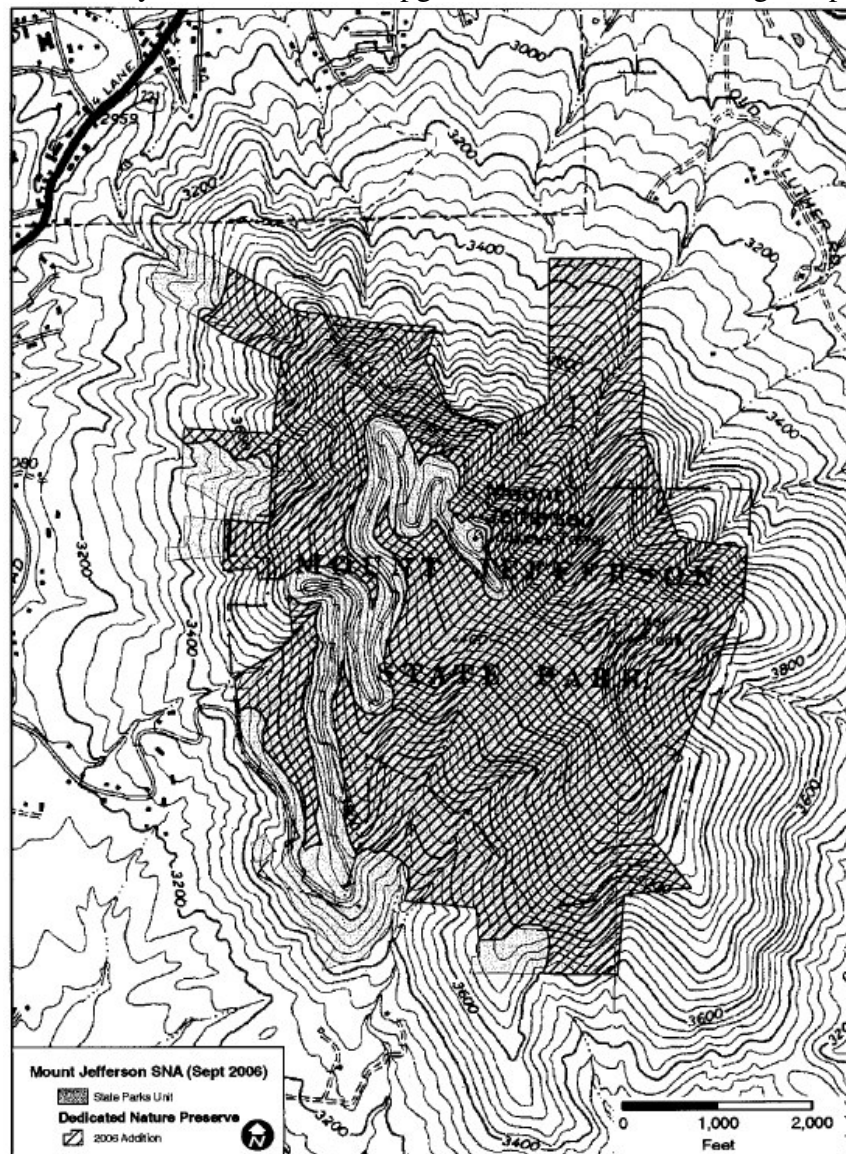
SR-P = Significantly Rare and at the periphery of its range in NC. Generally more common elsewhere.

SR-T = Significantly Rare throughout its range, with fewer than 100 populations statewide.

W = Watch List. These range from W1 – W7 for plant species and from W1 – W5 for animal species. Distribution, threats, and degree of rarity may not be fully known, but this designation is extended to any species believed to be rare and of conservation concern but not warranting active monitoring at this time. Species with more than one Watch list ranking are considered vulnerable to multiple threats. See the NHP's lists of the rare animal and plant species of North Carolina for more information on specific watch list definitions, available at <http://www.ncnhp.org/Pages/publications.html>

DEDICATED NATURE PRESERVE
MOUNT JEFFERSON STATE NATURAL AREA
2012

The DNP at Mount Jefferson was approved in December 2008 and covers 539 acres. The dedication boundary includes all of the SNA's known rare species occurrences and its ecologically significant, mature forests. Areas of successional and young forest on the lower slopes were excluded, as were the road, park office, staff residences, the lower overlook, the picnic area, and the summit tower. All of these areas have buffers of at least 150 feet in width (300 feet for the main road) so that there is appropriate room for maintenance and future expansion of these facilities. The upper overlook is included within the DNP boundary because the occurrence of the High Elevation Rocky Summit community immediately adjacent to it makes it inappropriate to expand this overlook beyond its existing footprint. Any existing disturbed areas within the dedication boundaries, such as power lines and road or shoulder work at the upper overlook, may be maintained or upgraded within their existing footprints.



CHAPTER 3

PARK PLANS

LAND PROTECTION PLAN
MOUNT JEFFERSON STATE NATURAL AREA
2012

Mount Jefferson State Natural Area contains 803 acres (as of July 1, 2011). This property encompasses the top of the mountain protecting the high quality natural communities of the mountain.

Land acquisition objectives for Mount Jefferson State Natural Area are: the protection of the primary resource, which is the high quality natural communities; the protection of the scenic resources or views of and from the mountain, and land for future public use facilities.

Protection Plan Additions

Approximately 1,323 acres of additional land is proposed for addition to Mount Jefferson State Natural Area.

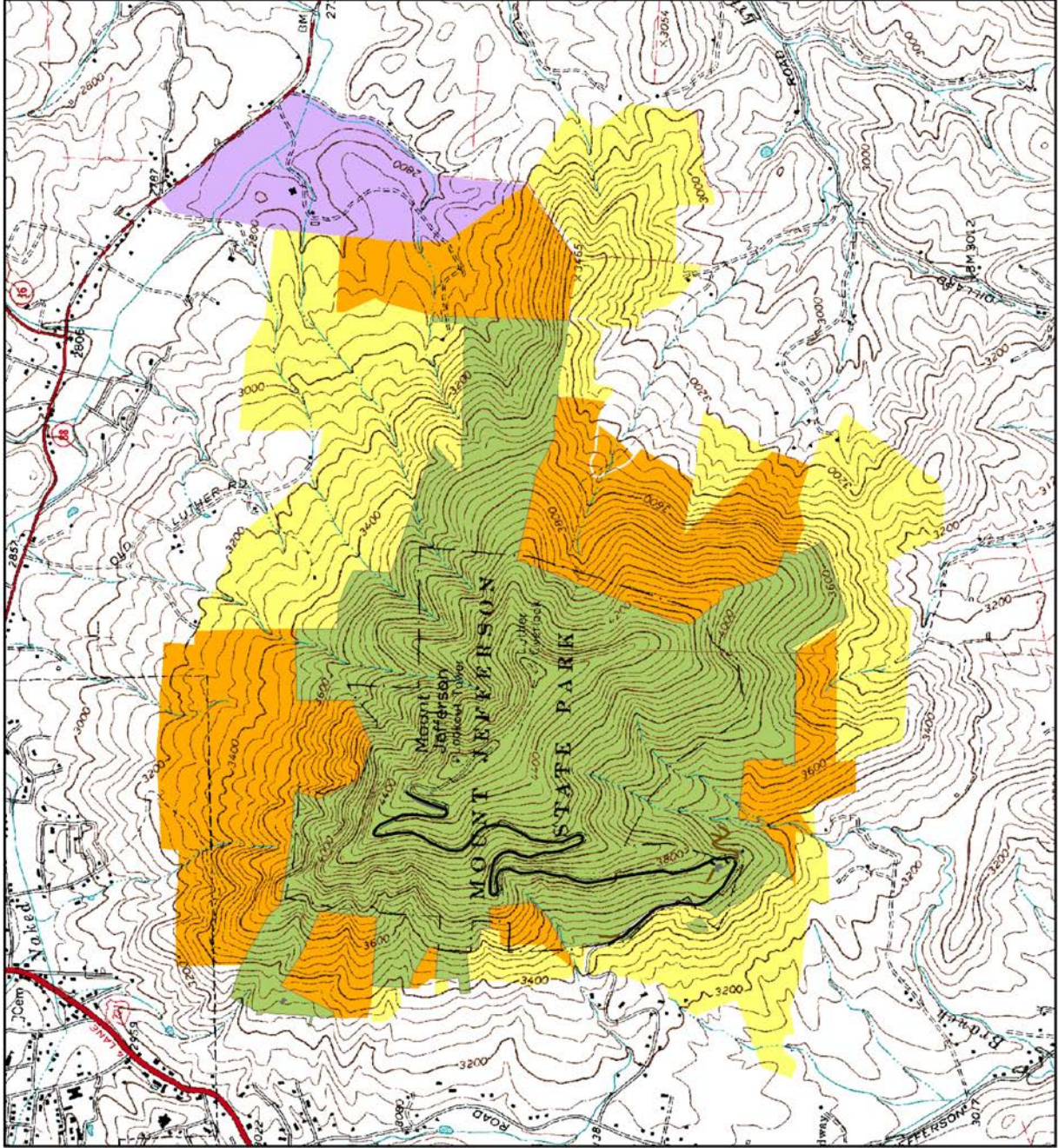
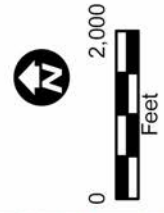
- 1,194 acres are needed for the protection of natural resources and scenic resources on the slopes of the mountain. These are shown as rust and yellow on the map.
- Approximately 128 acres at the end of Gaspin' Ridge to NC 88 are needed for future public-use facilities and scenic protection, shown as the purple area on the map.

Planned Land Protection Needs

Description	Acreage
July 1, 2010 size of Mount Jefferson State Natural Area	803
Planned land protection needs	1,323
Total planned size	2,126

Mt. Jefferson State Natural Area

- Land Protection Plan**
- State Natural Area
- Acquisition Objective 1**
- Primary resource protection
 - Inholding
 - Scenic protection
 - Water quality protection
 - Facilities development
 - Buffer



PROJECT EVALUATION PROGRAM (PEP) LIST
MOUNT JEFFERSON STATE NATURAL AREA

Rank	Project Title	Score*	Cost
1	Summit Toilet Facilities & Observation Deck	587	\$ 403,348
2	L- Vannoy Phase III, Day Use Area	565	\$2,201,839
TOTAL			\$2,605,187

** The score comes from the division's Project Evaluation Program (PEP). The PEP uses an evaluation formula to rank projects that considers four factors: the objective of the project; the justification or urgency for funding; the estimated annual number of persons (visitors and/or employees) who are affected by the project; and the project's significance, ranging from local to national. The park superintendent, district superintendent, a representative from the natural resource program, and a representative from the engineering/construction program evaluate projects. Fifteen objectives are used to categorize a project's purpose, and each project can have a primary and secondary objective.*

*** Estimated project cost does not include contingencies, design fee, nor escalation.*

1. Summit Toilet Facilities and Observation Deck

This project consists of construction of a new 800-square-foot toilet facility at the Summit area and the necessary auxiliary services including accessible parking, water, electrical, and septic. The project also includes the construction of an approximately 300-square-foot wooden observation viewing platform and minor trail improvements.

The existing toilet building serving picnickers and hikers near the summit cannot be reasonably be renovated as ADA-accessible or winterized for year-round use. A new toilet building closer to the parking lot will better meet park visitor needs. The old toilet building will be demolished and removed.

The Summit Trail terminates at an abandoned fire tower. This tower will eventually be removed by the N.C. Division of Forest Resources. With the tower removed, a small observation deck will be constructed to serve as the trail terminus and provide park visitors with an improved opportunity to enjoy the scenic view.

2. Vannoy Phase III, Day Use Area – Land Dependent

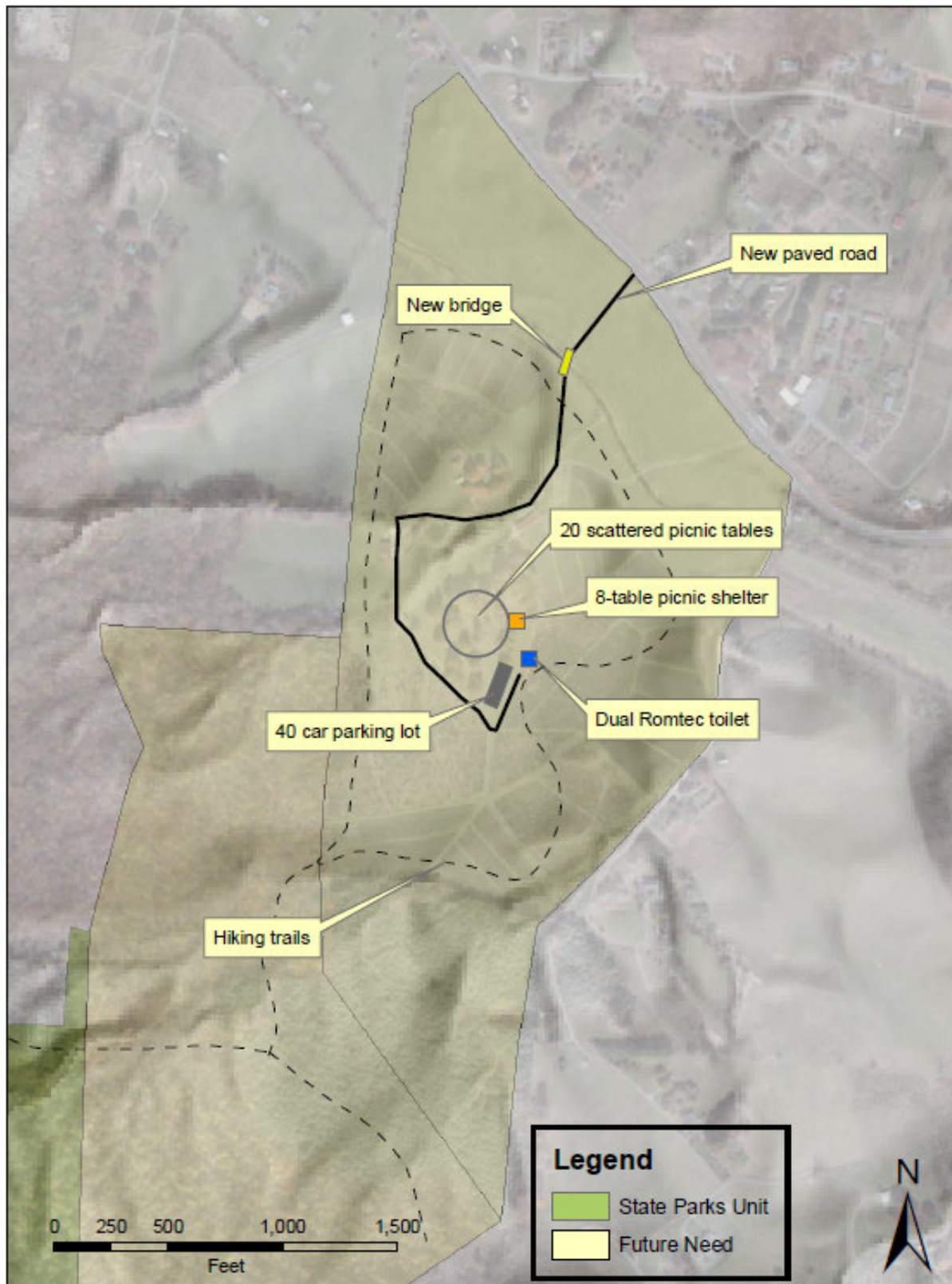
This project is land dependent and consists of construction a Day Use Area at the Vannoy Phase 3 property. Work will include a new vehicular bridge crossing over Naked Creek; 3,100 linear feet of paved roads; a 40-car parking lot; a toilet facility, a 8-table picnic shelter; 28 picnic tables; 2-miles of hiking trails; and connection to county water, sewer and electricity. The reuse of the existing house was not determined at this time.

Acquisition of Phase 3 of the Vannoy tract is an opportunity to provide a lower-elevation day use area in the park which will allow a section the park to remain open when inclement weather requires the closure of road to the summit. This new day use area will provide an additional picnicking and hiking trails. Future trails planned through the park will utilize this day use area as the connection to regional trails east of the park. This site may also be suitable for future partnerships projects with other recreation and tourism advocates.

Summit Toilet Facilities



Interim Day Use Area at Vannoy Phase 3



TRAILS PLAN
MOUNT JEFFERSON STATE NATURAL AREA
2012

Proposed New Trails

Two new trails are proposed at Mount Jefferson:

1. Lower Day Use Area walking/hiking trails – The acquisition of the Vannoy Phase 3 properties will provide sufficient acreage for the planning and development of approximately 2 miles of walking/hiking trails.

There is a demand for additional hiking trails in the Ashe county area. With the popularity of other area trails like the Profile Trail at Grandfather Mountain and the recent completion of the Summit Trail at Elk Knob, it is recommended to further review the feasibility of constructing a trail at Mount Jefferson starting at a lower elevation and continuing up the mountain to the summit area or existing trails. Use of the existing land will be considered as well as new properties as future lands are acquired.

2. The Mount Jefferson Loop Trail is a proposed hiking trail that would encircle Mount Jefferson at a lower elevation and that could be constructed without significant damage to the natural resource. Additional lands would have to be acquired before this 6.2-mile trail could be sustainably constructed and managed.

A map depicting the two proposed trails is attached.

Regional Trail Connections through Mount Jefferson State Natural Area

In 2007, the Division of Parks and Recreation's State Trails Program contracted the High Country Council of Governments to develop a conceptual regional trails plan for the counties of Ashe, Alleghany, Wilkes, Watauga, Avery, Mitchell and Vance. The resulting plan for trails in this area is titled the "High County Regional Trails Plan."

Of all the trail proposals captured in the "High County Regional Trails Plan," a loop trail potentially connecting the towns of Jefferson, West Jefferson and Boone is the most feasible mid-range planning goal. Longer term connections from Mount Jefferson State Natural Area to Elk Knob State Park, New River State Park and the Mountains-to-Sea State Trail have viability as long range planning goals due to their proximity and access to the National Park Service's Blue Ridge Parkway. When fully developed, these regional trail connections have the potential to showcase cooperative efforts between the state parks system and the surrounding communities.

Five-Year Plan

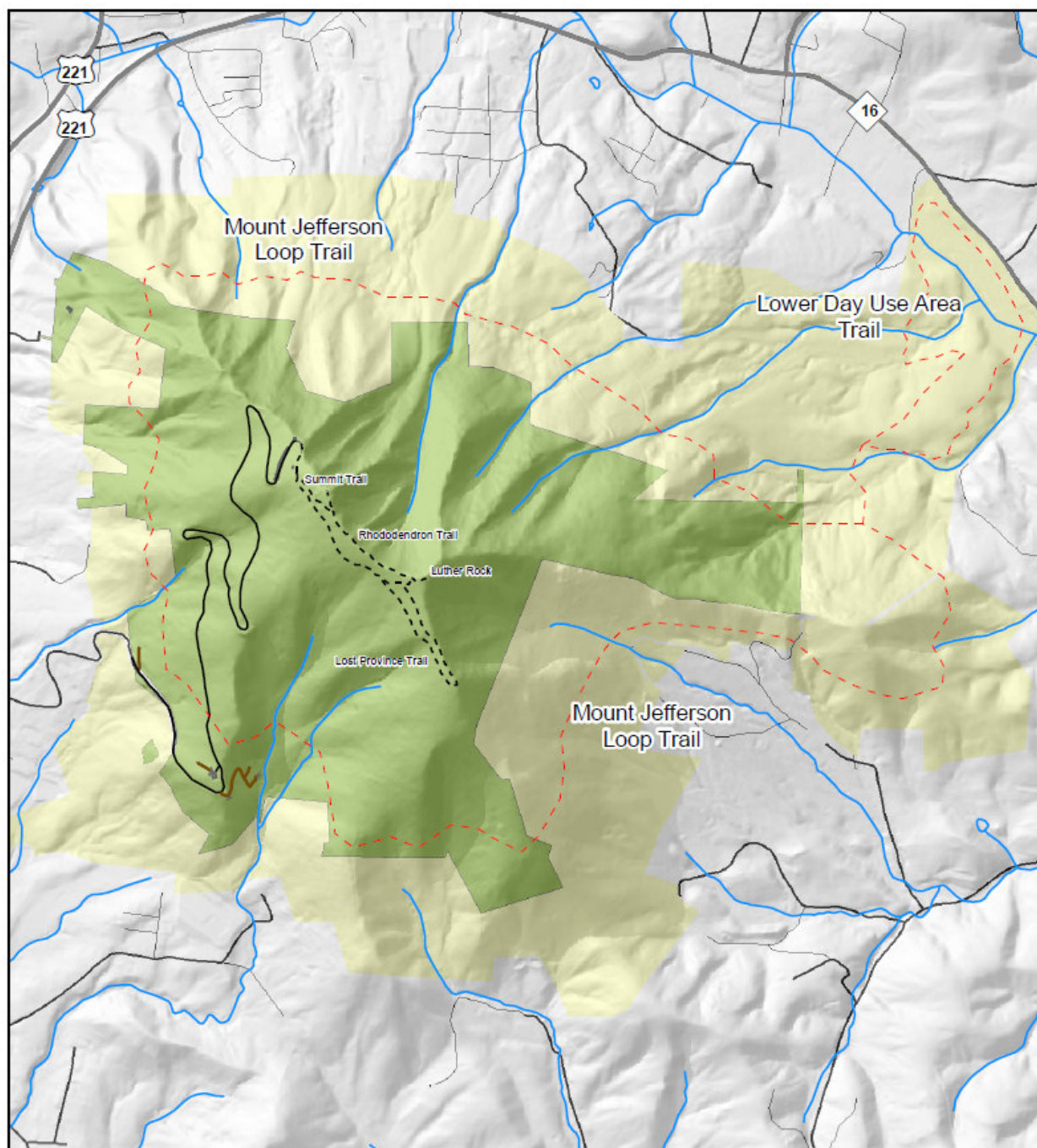
After acquisition of the Vannoy Phase III property, the State Trails Program will develop a specific plan for approximately 2 miles of walking/hiking trails.

As other proposed land acquisitions are completed, the State Trails Program will continue to

assess the alignment and feasibility of a loop trail circumnavigating Mount Jefferson State Natural Area.

The State Trails Program will continue to work with regional stakeholders and determine support for multimodal greenway trail connections from Mount Jefferson State Natural Area to the towns of Jefferson and West Jefferson.

The State Trails Program will review progress on trail goals and revisit the potential for regional connections to other state parks and conservation lands.



Mount Jefferson State Natural Area

Trails Plan
November 2010

- Park Boundaries**
- State Natural Area
 - Future Need
- Trail Plan**
- Existing
 - Planned

0 1,000 2,000
Feet



INTERPRETATION AND EDUCATION PLAN
MOUNT JEFFERSON STATE NATURAL AREA
2012

The 1987 State Parks Act defines the purposes of the state parks system. It establishes that:

The State of North Carolina offers unique archaeologic, geologic, biologic, scenic and recreational resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendants.

It further provides that:

Park lands are to be used by the people of this State and their visitors in order to promote understanding of and pride in the natural heritage of this State.

One of the best methods of meeting these purposes is through environmental education. The Department of Environment and Natural Resources has adopted the following definition of environmental education:

Environmental education is a process that increases awareness, knowledge, and understanding of natural systems – the interdependence of living things, the impact of human activities – and results in informed decisions, responsible behavior, and constructive action.

Mount Jefferson State Natural Area is well suited to environmental education. The park has three primary interpretive themes and several secondary themes. The primary themes are geology, ecology of Little Fishing Creek, and the history of the park and surrounding area.

PRIMARY INTERPRETIVE THEMES

Geology

Mount Jefferson appears to be an inselberg, an isolated mountain surrounded by mountain ranges. The outcrops provide an excellent opportunity for interpretive study of the formation and subsequent erosion of the Southern Appalachian Mountains.

Unique Plant Communities

Mount Jefferson contains a diversified aggregation of unique plant communities, including many disjunct species that usually occur farther north. For example, the Big Toothed Aspen Community on the north-facing slope of the mountain is more commonly seen from West Virginia to Canada. Nothing blocks the Arctic winter winds, since the next mountain range visible to the north is on the distant horizon.

DELIVERY STRATEGIES FOR I&E PROGRAMS

Delivery strategies are the ways that the park gets across its educational messages (e.g., special events, volunteer service days, interpretive programs, newsletters or radio programs, key partnerships).

- Mount Jefferson holds an annual poetry contest for K-8 students from local schools. More than 320 students competed in 2010. The contest was judged by North Carolina Poet Laureate Katharine Byer. Winning poets received outdoor equipment prizes donated by the Friends of State Parks. This strategy has been successful and the park plans to continue.
- Park rangers visit schools, libraries and retirement centers in the local community. A total of 67 outreach programs reached 2,501 people in fiscal year 2009-2010. The park plans to continue this strategy.
- Mount Jefferson State Park celebrates Take A Child Outside Week each September. Staff led orienteering programs and a naturalist skills program for 40 children in 2010. Additionally, the week-long celebration is promoted in local newspapers and on a local radio program. The parks plans to continue participating in annual Take a Child Outside Week activities.

OUTREACH GOALS

Outreach goals describe ways that the park hopes to have a larger impact with its visitors and local communities.

- Mount Jefferson plans to focus efforts to better reach the 12 – 18 year old demographic. One way to accomplish this goal is through partnerships with middle and high schools.
- Mount Jefferson plans to increase its evening program efforts.
- The park is seeking ways to use technology to reach more visitors with its stewardship message (Podcast, video, web page enhancements).

EXHIBITS AND SIGNAGE PLAN
MOUNT JEFFERSON STATE NATURAL AREA
2012

Exhibits and signs in North Carolina State Parks can be regulatory, orientation or interpretive. This signage follows system wide sign guidelines that preserve the North Carolina state park “look” and ensure maximum accessibility. Signs also express the character of the individual All exhibits and signs in the park were inventoried and evaluated in 2010. Following is the summary with bulleted items for future action.

Visitor Center Exhibits

■ **Update information**

The maps and images on this changeable exhibit can be updated to reflect recent growth in the surrounding community. This visually highlights the importance of the preservation of the mountain wilderness.

Parkwide Interpretive Signs

■ **Update information**

Update interpretive signs to meet new division graphics standards.

Parkwide Wayfinding System

■ **Reorganize Information within Clusters**

In general, visitors should first receive reassurance that they have arrived at an arrival point before they receive other information or directions. Some sign clusters at Mount Jefferson SNA could be rearranged to follow this guideline. The park office could use a sign over or near the doorway that labels this arrival point.

■ **Improve Consistency in Appearance**

Regulatory and information signs appear in several formats throughout the park – DOT-style metal signs, hand painted on wood and carved recycled plastic. A single format should be chosen.

- Carved recycled plastic signs are an appropriate style for roadside and trailside orientation signs, labels (e.g., restrooms) and regulatory signs within the SNA. Lettering on these should be a consistent size and must have a flat bottom cut to minimize glare.
- Information kiosk designs should be updated to follow the 2010 graphic identity updates.
- As costs allow, interpretive signs should be transferred from 36x48 inch kiosk format to high pressure laminate (HPL) in low profile frames, maximum size 18x30 inches. This provides a clear visual distinction for visitors between information locations and interpretive sites.
- Red and white metal warning signs highlight areas of significant danger.

■ Reduce Sign Pollution

Too many signs in a park create visual clutter and may actually have the opposite effect than intended – visitors may stop reading signs altogether. This can create a dangerous situation if visitors do not pay attention to signs with important safety messages. It also ultimately hurts our ability to reach visitors with stewardship and interpretive messages.

Several places at Mount Jefferson SNA have repetitive information on signs within a single cluster. In some cases, a lettered sign may not be necessary. (E.g., “no vehicles” sign at picnic area trailhead. The post itself works just as well to block vehicles, so the lettered sign is redundant.) Information within these clusters can be eliminated or combined onto fewer signs. The general information kiosks can hold much of the information that is currently dispersed on to individual signs.

■ Regional Trail Signage

Coordinate and design regional trail signage to reflect both regional trail identification needs and Mount Jefferson SNA identity. Particular attention should be paid to signage on boundaries where regional trails cross into the park unit.

NATURAL RESOURCE MANAGEMENT PLAN
MOUNT JEFFERSON STATE NATURAL AREA
2012

Category	Subcategory	Issue	Priority
Animal Resources Management	Exotic Species Management	- Continue Gypsy Moth surveys with DFR. - Identify and treat Hemlock Woolly Adelgid Sites.	Medium Medium
	Inventory Deficiency	- Salamander survey on seeps and headwaters of Naked Creek.	Medium
Botanical Resources Management	Exotic Species Management	- Updated park survey. - Prioritize, develop control plans. - High priority species: oriental bittersweet, multiflora rose. - Licensed herbicide applicator on staff	Medium High High High
	Management Guidelines	- Park-specific natural resource management plan.	Medium
Land Use Management	Scientific Research	- DPR staff to continue lichen air quality study.	Medium
	Fire Management Planning	- Explore fire ecology of high elevation hardwood ecosystems. - Staff training	Medium Medium

ANIMAL RESOURCES MANAGEMENT ISSUES

Exotic Species Management Although hemlock is not a major component of the SNA's forest communities, the SNA is known to have infestations of the non-native Hemlock Woolly Adelgid (*Adelges tsugae*), which is now widespread in hemlock stands throughout western North Carolina. Left untreated, these infestations will kill the park's hemlocks.

In the spring of 2009, the N.C. Division of Forest Resources (DFR) agreed to provide the Division with the chemical imidacloprid so that DPR staff could treat infested hemlocks. NRP staff have developed standardized treatment and monitoring protocols in consultation with DFR, the NPS, and The Nature Conservancy, and DFR has provide field training for DPR staff. Hemlocks were treated and mapped by park staff in the spring of 2010, and additional treatments are scheduled. Treatment data are being managed by DFR staff as part of their statewide database. Treatments can be expected to be effective for 1-3 years, depending on the size and condition of the tree at first treatment.

Park staff will continue to monitor and treat hemlocks, using funding for chemicals and other equipment provided through DFR.

Inventory Deficiency Although the SNA is hydrologically generally high and dry, it is located within the New River watershed. The two forks of the New River roughly encircle the SNA, and five small tributaries occur on the park, including Naked Creek, which is on the northern slopes of the mountain. Little is known of the amphibian diversity in these tributaries, all of which drain to the New River. Such surveys would expand the park's natural heritage database and provide baseline survey data.

The Natural Resource Program will conduct or coordinate inventories of amphibian diversity in the park.

BOTANICAL RESOURCES MANAGEMENT

Exotic Species Management The park was surveyed for exotic plant species as part of Poindexter's 2006 floral survey. He identified 158 (22.5 percent) non-native taxa, primarily in disturbed habitats. Three taxa are listed by the N.C. Department of Agriculture as noxious weeds: Plumeless Thistle (*Carduus acanthoides*), Oriental Bittersweet (*Celastrus orbiculatus*), and Canada Thistle (*Cirsium arvense*). Other highly invasive species known from the SNA include multiflora rose, Korean lespedeza (*Lespedeza cuneata*), Japanese Grass (*Microstegium vimineum*), and Japanese Honeysuckle (*Lonicera japonica*).

Park staff have developed a general control plan that prioritizes the highest threat species. However, species specific treatment plans are needed.

Natural Resources Program staff will develop and implement species-specific treatment plans in collaboration with park staff. Appropriate park staff will be properly licensed by the N.C. Department of Agriculture to apply herbicides.

LAND USE MANAGEMENT

Park Resource Management Plan Apart from the division's various resource management guidelines and the GMP, there is no park-specific resource management plan. A comprehensive, park-specific resource management plan should be developed that would address all of the GMP issues in more depth and include additional direction on preventing or correcting threats or damage to significant natural resources.

Natural Resource Program staff will develop a park-specific resource management plan in collaboration with park staff.

Scientific Research Although the park's ecosystems offer significant opportunities for both short and long-term research, there has not been a coordinated effort to advertise the park's research needs to the academic community. Much useful research at low or even no cost might be obtained by enlisting the assistance of university researchers, upper level biology or ecology field classes, advanced undergraduates and graduate students, interns, and students working on independent study projects. Such projects could do much to address NRID data gaps, update species surveys, map community types, etc.

Natural Resource Program staff will include Mount Jefferson State Natural Area in any discussions of research opportunities with potential university partners.

Fire Management Planning Prescribed fire in these high elevation hardwood-dominated natural communities has previously not been given much credence. However, a growing body of evidence shows that periodic, low intensity fires are not ecologically inappropriate in these ecosystems, and much interest in burning these areas has arisen since the formation of the Southern Blue Ridge Fire Learning Network (FLN).

The FLN engages multiple federal, state and private land management agencies in a collaborative effort to enhance the capacity to implement ecological fire management in the Southern Blue Ridge ecoregion. Together, they work to define a healthy, resilient landscape and to identify where, when and how to restore these ecosystems. Expertise in numerous aspects of restoration is distributed among partners and researchers involved in the collaboration. Sharing this knowledge among partners and with other networks accelerates restoration.

The partnership has identified shortleaf pine-oak, pine-oak-heath, dry-mesic oak-hickory and high-elevation red oak forests as target communities for restoring fire regimes. These systems cover about 60 percent of the area in the region. About 50,000 acres of this landscape burn each year, through controlled burns or wildfires; four to eight times this much area needs fire or surrogate treatments each year to maintain these forests in a resilient condition.

Natural Resource Program staff will develop a plan for prescribed burning at Mount Jefferson State Natural Area.